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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,361	12/12/2005	Daniel Sylvain	030676-00007	9013
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EXAMINER				
D'ANIELLO, NICHOLAS P				
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1793				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/560,361

**Applicant(s)**

SYLVAIN, DANIEL

**Examiner**

Nicholas P. D'Aniello

**Art Unit**

1793

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 12-15, 37 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 16-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date 12/12/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-11 and 16-36 in the reply filed on March 30<sup>th</sup> 2009 is acknowledged. The traversal is on the ground(s) that the claims of Group II have been amended to depend on independent claim 1. This is not found persuasive because the claims of Group I and II still lack a unity of invention as applied in the restriction requirement; the dependency of the claims does not overcome the restriction requirement which is based on a lack of unity where the common technical feature of the two groups is known in the prior art. The apparatus claims have been amended to include an intended use of being used for the method of claim 1 however this does not positively limit the scope of the apparatus claim.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 17 (and claims which depend from these claims) are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Claims 16 and 17 recite the limitation "the unwinding" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 and 16-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberger (USP 2,662,271) in view of Daub (USP 3,365,144).

In regard to independent claim 1, Greenberger teaches a method for managing the feed of a new coil into a continuous inline processing plant of a band-type product, said plant being supplied with successive bands and including means for controlling the continuous running of the band successively into an inlet section (un-coiler 12 to third pinch roll unit 26), an upstream accumulator (looping pit 27), a processing section (looping pit 18), a downstream section (deflector rolls 28) and an outlet section (roller unit 29), the connection of the tail of a first coil when completely unwound with the head of a next coil being carried out in the inlet section of the plant in two successive stage cycles (by flash welder 24), respectively a first preparation cycle for preparing the ends (sections 12-16), respectively tail and head ends of both bands, for the junction thereof and a second junction cycle for joining both facing edges of said ends (sections 21-26), a method wherein the running of the band is stopped or, at least, slowed down in the inlet section for a period of time necessary to carry out all the connection operations (conventional in the art to stop or slow down see column 1 lines 35-44), and the processing section (looping pit 18) is supplied, during the stoppage time, with a band

length set aside beforehand in the upstream accumulator (pit 27) for carrying on the process at a normal running speed (see columns 2-4).

The claim differs from the reference in calling for that the joining the facing edges of the ends of both bands is performed in at least two portions of the inlet section, respectively a first portion and a second portion, between which is located an intermediate accumulator for setting aside a variable band length, and that the time period necessary to perform all the connection operations of both bands is divided into at least two time periods, respectively a first time period corresponding to the first preparation cycle and to a first phase of the second junction cycle of the facing edges of both bands, and a second time period corresponding to a second phase of the second junction cycle, said both time periods being separate by a time interval of variable duration corresponding to the running of the band length set aside in the intermediate accumulator.

However, Daub teaches a similar method of managing coil and the desirability to perform the joining of the facing edges in two separate portions (first welder 5 and second welder 12) between which is located an intermediated accumulator (mandrel 9) for setting aside a variable band length, and that the time period necessary to perform all the connection operations of both bands is divided into at least two time periods, respectively a first time period corresponding to the first preparation cycle and to a first phase of the second junction cycle of the facing edges of both bands, and a second time period corresponding to a second phase of the second junction cycle, said both time periods being separate by a time interval of variable duration corresponding to the

running of the band length set aside in the intermediate accumulator (welding necessarily takes a period of time and is stopped during winding) which prevents coils from sagging in the pits (see at least column 1 line 54 - column 2 line 64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the joining in separate sections (separated by a period of time) with an accumulator in between in the method of Greenburger in order to prevent sagging of the coils as taught by Daub.

In regard to claim 2, the junction of both bands is performed by welding in a welding machine (in Greenberger welding machine 24, in Daub welders 5 and 12), the second junction cycle of the facing edges of the ends of both bands including a welding operation followed by at least one finishing operation of the welded junction, characterized in that the welding machine is located in the first portion of the inlet section (see figure 1 of Daub), the welding operation being processed at the end of the first time period in a first phase of the second junction cycle, and that the tail of the first band and its welded junction with the head of the next band is then passed in the intermediate accumulator (see figure 2 of Daub - mandrel 9), the running being stopped again in the second portion of the inlet section to perform at least one finishing operation (such as pickling operation, not shown - column 3 lines 10 of Daub) during a second time period of the second junction cycle.

In regard to claim 3, the junction of both bands is performed by welding in a welding machine, the second junction cycle of the facing edges of the ends of both bands including a welding operation followed by at least one finishing operation of the

welded junction (such as pickling operation, not shown - column 3 lines 10 of Daub), characterized in that the welding machine 12 is located in the second portion (figure 2 of Daub) of the inlet section, that, in a first phase of the second junction cycle, the tail of the first band is temporarily joined with the head of the next band at the end of the first time period of the general connection process, and that the running of the band is then resumed to bring said temporary junction into the second portion of the inlet section by passing through the intermediate accumulator (mandrel 9), the running being stopped again during the second time period of the general connection process in order to perform the welding operation itself and at least one finishing operation in a second phase of the second junction cycle (see Daub - column 3 lines 11-53).

In regard to claim 4, before completion of the unwinding of the first coil, band lengths are set aside in the upstream accumulator and in the intermediate accumulator corresponding to the maximum capacity thereof (predetermined capacity of coil is reached - see Daub column 3 lines 31-37).

In regard to claims 5 and 6, during the first time period of the general connection process, the processing section is supplied at normal speed from the upstream accumulator, and that, at the same time, the passage, into the upstream accumulator from the intermediate accumulator, of a band length able to replace at least one portion of the length passing into the processing section is controlled (see Daub - figure 1 and column 3).

In regard to claim 7, the intermediate accumulator (mandrel 9) has a capacity corresponding at least to the band length running through the processing section at the

normal speed for the duration of the first time period of the general connection process (Daub column 3).

In regard to claim 8, once the junction has been stopped in the second portion of the inlet section (because the junction does not need to stop, i.e. the junction can be made by slowing down, this limitation is optional and does not positively limit the scope of the claim), the unwinding speed of the new coil is increased for filling, at least partially, the intermediate accumulator, so that, according to the length of the new coil, the tail thereof can be stopped in the first portion of the inlet section for the junction thereof with the head of a third coil, after setting aside a band length corresponding at least to the first time period of the general connection process (Daub - column 3).

In regard to claim 9, the upstream accumulator has a capacity corresponding at least to the band length running through the processing section at normal speed during the second time period of the general connection process (Daub - column 3 lines 35-54).

In regard to claim 10, the filling rate of the intermediate accumulator is managed relative to the length of each new coil so as to restore the upstream accumulator to the maximum capacity thereof after each time period of the general connection process (complete unwinding and rewinding - Daub column 3).

In regard to claims 16 and 17, before completion of the unwinding of the first coil (the claims from which these claims are dependent do not recite this unwinding so the Examiner is unable to determine the effect of this limitation and it does not limit the



scope of the claim), band lengths are set aside in the upstream accumulator and in the intermediate accumulator, corresponding to the maximum capacity thereof.

In regard to claims 9, 10, 18-26 and 32-36, the processing conditions are not specifically defined (such as "normal speed", "a band length able to replace at least one portion of the length passing into the processing section", "a capacity corresponding at least to the band length running through the processing section at the normal speed for the duration of the first or second time period of the general connection process") and it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the processing conditions (such as accumulator capacity and speed) in the method of Greenberger and Daub in order to increase the efficiency of the process.

In regard to claims 27-31, once the junction has been stopped in the second portion of the inlet section (as noted above, this stopping is not required, because alternatively the coil may slow down, therefore this limitation is not positively required and does not limit the scope), the unwinding speed of the new coil is increased for filling, at least partially, the intermediate accumulator, so that, according to the length of the new coil, the tail thereof can be stopped in the first portion of the inlet section for the junction thereof with the head of a third coil, after setting aside a band length corresponding at least to the first time period of the general connection process.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greenberger and Daub as applied to claim 1 above, and further in view of Sendzimir (USP 4,513,490).

Greenberger and Daub teach the method of managing coil as applied to claim 1 above but do not disclose at the end of the second time period of the general connection process, the welding spot is annealed. However, Sendzimir teaches a similar method of managing coils with multiple accumulators and connection processes and the desirability to anneal the coil after the connection processes in order to prepare them for final packaging and shipping (column 4 lines 36-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to anneal the welded spot after the connection process in the method of Greenberger in order to prepare the coil for final packaging and shipping as taught by Sendzimir.

### ***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas P. D'Aniello whose telephone number is (571)270-3635. The examiner can normally be reached on Monday through Thursday from 8am to 5pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica Ward can be reached on (571) 272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. P. D./  
Examiner, Art Unit 1793

/Stanley Silverman/  
Supervisory Patent Examiner, Art Unit 1793